

ABSTRACT

A small multi-mode antenna in which a single feeding point can be used commonly for multiple frequencies and an RF module using such antenna for use in less-costly and small multimedia wireless apparatus is provided. The antenna is configured such that a single feeding point 4 which is common for multiple frequencies is set up at one end of a radiating conductor 1, a first one-port resonant circuit 2 is connected to the one end thereof, and a second one-port resonant circuit 3 is connected to the other end of the radiating conductor 1. With a conductance component of admittance in view from the feeding point 4 toward free space equaling the characteristic admittance 5 in the RF circuit, a susceptance component of the admittance is canceled out by the resonant circuit 2 connected to the feeding point 4 for multiple frequencies.